

What is claimed is:

1. An improved roller truck for supporting a rotating instrument drum of a CT scanner, comprising:
  - a spring plate having top and bottom surfaces and unconstrained side edges extending between opposing ends;
  - 5 at least two axles secured to one of the bottom and the top surfaces of the spring plate;
  - an attachment member secured to one of the bottom and the top surfaces of the spring plate between the two axles and extending substantially parallel with each of the axles, the attachment member for securing the roller truck to one of a support frame of a CT scanner and an instrument drum mounted for rotation on the support frame; and
  - 10 rollers rotatably mounted on each axle for supporting and allowing the instrument drum to rotate with respect to the support frame of the CT scanner;
  - wherein the spring plate is free to resiliently bend about the attachment member and is adapted such that, when the instrument drum of the CT scanner is rotated during operation
  - 15 of the CT scanner, vibration frequencies associated with the rotating drum are shifted by the roller truck to minimize distortions in reconstructed images produced by the CT scanner.
2. A roller truck according to claim 1, wherein the attachment member is secured to the bottom surface of the plate.
3. A roller truck according to claim 1, wherein the axles are secured to the bottom surface of the plate.
4. A roller truck according to claim 1, wherein the axles are secured to the plate adjacent the opposing ends of the plate.
5. A roller truck according to claim 1, wherein the axles are equally spaced from the attachment member.
6. A roller truck according to claim 1, wherein the attachment member is equally spaced from the opposing ends of the plate.

7. A roller truck according to claim 1, wherein the attachment member is adapted to pivotally secure the truck to a gantry of a CT scanner such that the truck can pivot about a longitudinal axis of the attachment member.

8. A roller truck according to claim 7, wherein the attachment member is tubular.

9. A roller truck according to claim 1, wherein the spring plate is substantially flat.

10. A roller truck according to claim 1, further comprising resilient tires received on each roller.

11. A gantry of a CT scanner including at least one roller truck according to claim 1 and further comprising:

a support frame;

an annular drum mounted for rotation with respect to the support frame and

5 having a continuous circumferential bearing surface; and

an annular disk extending radially inwardly from the drum, the disk adapted to receive and support computed tomography components;

wherein the attachment member of the at least one roller truck is secured to the support frame and the rollers of the roller truck support the bearing surface of the annular drum  
10 such that the drum and disk can rotate with respect to the support frame.

12. A gantry according to claim 11, wherein the attachment member of the at least one roller truck is pivotally secured to the support frame such that the roller truck can pivot about a longitudinal axis of the attachment member.

13. A gantry according to claim 11, wherein the support frame is annular and the drum is coaxially received within the support frame.

14. A gantry according to claim 13, wherein the circumferential bearing surface of the drum faces radially outwardly and the truck is positioned between the drum and the support.

15. A gantry according to claim 13, wherein a space is provided between the drum and the support to allow for thermal expansion of the drum and the disk.

16. A gantry according to claim 11, wherein the spring plate of the truck is substantially flat.

17. A gantry according to claim 11, wherein the at least one roller truck comprises two roller trucks positioned so that the trucks are equally spaced on opposite sides of a vertical center line of the drum.

18. A gantry according to claim 11, further comprising a motor operatively connected to the roller truck for rotating the drum.

19. A gantry according to claim 11, further comprising resilient tires received on each roller of the truck.

20. A CT scanner including a gantry according to claim 11, and further comprising x-ray tomography components operatively mounted on the annular disk of the gantry for rotation therewith.